

# **Local Hazard Mitigation Plan ANNEX**

## **City of Orinda**

### **May 2005**

## **Introduction**

The City of Orinda is a small-sized city in Contra Costa County, California. The City has a population of 17,599 people, based on the 2000 census<sup>1</sup>. Last year, the City's operating budget was \$8.4 million. The City employs 38 people. While the City provides local police services through a contract with the Contra Costa County Sheriff's Department, the fire services are supplied by a separate fire district.

## **The Planning Process**

This process of preparing this plan was familiar to the City of Orinda. The City has a Safety Element to its General Plan last updated in 1987 that includes a discussion of fire, earthquake, flooding, and landslide hazards. In addition, the City routinely enforces the requirements of the California Environmental Quality Act (CEQA) requirements (which, since 1988, have required mitigation for identified natural hazards). The City's effort has focused on building on these pre-existing programs and identifying gaps that may lead to disaster vulnerabilities in order to work on ways to address these risks through mitigation.

Many of the activities conducted by the City were fed into the planning process for the multi-jurisdictional plan. The City participated in various ABAG workshops and meetings, including the general "kick-off" meeting. In addition, the City has provided written and oral comments on the multi-jurisdictional plan. Finally, the City provided information on facilities that are viewed as "critical" to ABAG.

Key City staff met on two occasions to identify and prioritize mitigation strategies appropriate for the City. Staff involved in these meetings included the Senior Civil Engineer, Community Police Officer, and Police Chief. At the first and second meeting, the general priorities and appropriate City departments were identified. The second meeting identified preliminary budgets and potential funding sources for strategies designed as "High" priority. The City provided the opportunity for the public to comment on the DRAFT mitigation strategies selected by City staff by presenting the information to the Public Safety Committee at the meeting on February 23, 2005 and at the City Council meeting on May 17, 2005. The resolution adopting the plan and strategies was on the City Council agenda for May 17, 2005. The mitigation strategies will become an implementation appendix to this Safety Element.

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<sup>1</sup> For complete Census information on this city, see <http://www.bayareacensus.ca.gov/>.

## Hazard and Risk Assessment

The ABAG multi-jurisdictional Local Hazard Mitigation Plan, to which this is an Annex, lists nine hazards that impact the Bay Area, five related to earthquakes (faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis) and four related to weather (flooding, landslides, wildfires, and drought). These hazards also impact this community, except for surface faulting. Surface faulting is not a hazard in the City of Orinda because no active faults are located in the City.

While the City has undertaken a number of general hazard mapping activities since the first Safety Element was prepared by the City, all of these maps are less detailed and are not as current as those shown on the ABAG website at <http://quake.abag.ca.gov/mitigation/>.

The City has had a number of landslides in the hills of the City, including those that have been repaired on the following roadways: Zander Drive, Oak Road, Camino Pablo, Cañon, Monte Vista (repaired with incipient sliding), Happy Valley Road, and Diablo View. In 1991 the City commissioned a study map of all known landslides in the City of Orinda. Photo Interpretative Landslide Features Maps of the entire City were created based on orthophoto topography.

Information on disasters declared in Contra Costa County is available at <http://quake.abag.ca.gov/mitigation/disaster-history.html>.

The City examined the hazard exposure of City urban land based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 6,317 urban acres in the City,

- ◆ Earthquake Faulting - No active faults run within the City of Orinda so rupture of a fault is not a direct concern.
- ◆ Earthquake Shaking - 6,317 acres are in the highest two categories of shaking potential, in large part because of the proximity of the Hayward fault.
- ◆ Earthquake-Induced Landslides - the California Geological Survey has not completed mapping of this hazard in the City of Orinda. However, because few areas have been mapped as landslides, this hazard is viewed as similar to that posed by weather-related hazards.
- ◆ Earthquake Liquefaction - 155 acres are in areas of moderate, high, or very high liquefaction susceptibility.
- ◆ Tsunamis - While tsunamis will not likely be a hazard in the City of Orinda, the mapping of the inundation area has not been completed at this time.
- ◆ Flooding - 149 acres are in the 100-year floodplain, while an additional 1 acre is in other flood-prone areas.
- ◆ Landslides - 2,287 acres are in areas of existing landslides.
- ◆ Wildfires - 1,660 acres are subject to high, very high, or extreme wildfire threat (because of the urban nature of the City), and 6,127 acres are in wildland-urban interface threat areas.
- ◆ Dam Inundation - 102 acres are subject to dam inundation.
- ◆ Drought - all 6,317 acres are subject to drought.

The City also examined the hazard exposure of infrastructure based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickdbh2.html>. Of the 134 miles of roadways in and through the City,

- ◆ Earthquake Faulting - No active faults run within the City of Orinda so rupture of a fault is not a direct concern.
- ◆ Earthquake Shaking - 134 miles of roadway are in the highest two categories of shaking potential.
- ◆ Earthquake-Induced Landslides - the California Geological Survey has not completed mapping of this hazard in the City of Orinda. Potentially there may be infrastructure at risk since there are roads in existing landslide areas.
- ◆ Earthquake liquefaction - 3 miles of roadway are in areas of moderate, high, or very high liquefaction susceptibility.
- ◆ Tsunamis - While tsunamis will not likely be a hazard in the City of Orinda, the mapping of the inundation area has not been completed at this time.
- ◆ Flooding - 4 miles of roadway are in the 100-year flood plain, while an additional one mile is in other flood-prone areas.
- ◆ Landslides - 119 miles of roads are in areas of existing landslides. The City has had several roads compromised by landslides in the past that have been repaired including: Zander Drive, Oak Road, Camino Pablo, Cañon, Monte Vista (repaired with incipient sliding), Happy Valley Road, and Diablo View. There is evidence of landslides on El Toyonal and Camino Sobrante.
- ◆ Wildfires - 30 miles of roadways are subject to high, very high, or extreme wildfire threat, 127 miles of roads are in wildland-urban interface threat areas.
- ◆ Dam Inundation - 2 miles of roadway are in an area subject to dam inundation;
- ◆ Drought - is not a hazard for roadways.

Finally, the City examined the hazard exposure of critical health care facilities, schools, and city-owned buildings based on the information on ABAG's website at <http://quake.abag.ca.gov/mitigation/pickcrit.html>. Of the critical facilities in the City,

- ◆ Earthquake Faulting - No active faults run within the City of Orinda so rupture of a fault is not a direct concern.
- ◆ Earthquake Shaking - all 9 schools, both fire stations, and the City Hall and Library are in the highest two categories of shaking potential.
- ◆ Earthquake-Induced Landslides - the California Geological Survey has not completed mapping of this hazard in the City of Orinda. However, this is unlikely to be an issue because no critical health care facilities, schools, and city-owned buildings are in existing landslide areas.
- ◆ Earthquake Liquefaction - no critical health care facilities, or city-owned facilities are in areas of moderate, high, or very high liquefaction susceptibility, two schools are located in these areas.
- ◆ Tsunamis - While tsunamis will not likely be a hazard in the City of Orinda, including the critical facilities, the mapping of the inundation area has not been completed at this time.

- ◆ Flooding - no critical health care facilities, schools, or city-owned facilities are in either the 100-year floodplain or in other flood-prone areas.
- ◆ Landslides - one long term health care facility and five schools are in areas of existing landslides; one city-owned facilities are in areas of existing landslides.
- ◆ Wildfires - 9 schools, one long-term care facility, and the City Hall, Community Center and Library are subject to wildfire threat and are in wildland-urban interface threat areas.
- ◆ Dam Inundation - no critical health care facilities, schools, or city-owned facilities are in an area subject to dam inundation.
- ◆ Drought - Will not affect City buildings directly. However, the City does not operate a water supply or distribution system. East Bay Municipal Utility District (EBMUD) supplies water service to the City of Orinda.

In spite of the areas of the City located in flood-prone areas, there are two repetitive loss properties in the City based on the information at <http://quake.abag.ca.gov/mitigation/pickflood.html>.

The City plans to work with ABAG during 2005 to improve the risk assessment information being compiled by ABAG by providing information on unreinforced masonry buildings and soft-story apartments located in the City.

Drought, though a potential problem in the City, is not fully assessed. The City will work with ABAG and various water supply agencies on this issue.

The City plans to work with ABAG to develop specific information about the kind and level of damage to buildings, infrastructure, and critical facilities, which might result from any of the hazards previously noted. The ABAG Annex states that ABAG will be doing this work in 2005 through early 2006.

As these impacts are not fully developed, the City has reviewed the hazards identified and ranked the hazards based on past disasters and expected future impacts. The conclusion is that earthquakes (particularly shaking), flooding, wildfire, and landslides (including unstable earth) pose a significant risk for potential loss.

## **Mitigation Activities and Priorities**

As a participant in the ABAG multi-jurisdictional planning process, City of Orinda staff helped in the development and review of the comprehensive list of mitigation strategies in the overall multi-jurisdictional plan. The list was discussed at a meeting of the City Police Chief and the City Engineer. At the meeting, all of the mitigation strategies were reviewed and forwarded on to the Public Safety Committee. The tentative decision on priority was made based on a variety of criteria, not simply on an economic cost-benefit analysis. These criteria include being technically and administratively feasible, politically acceptable, socially appropriate, legal, economically sound, and not harmful to the environment or our heritage.

Over time, we are committed to developing better hazard and risk information to use in making those trade-offs. We are not trying to create a disaster-proof region, but a disaster-resistant one. In addition, several of the strategies are existing City programs.

These draft priorities were submitted to the City Manager and City Council for their review on May 19, 2005. The public was provided with an opportunity to comment on the DRAFT priorities. The final strategies (as shown in the attached Table) will become an *Implementation Appendix* to the City's *Safety Element*.

In addition, the City examined the hazard exposure information to City-owned critical facilities supplied by ABAG. The City has determined that the new City Hall will be primary Emergency Operation Center (EOC) in the event of a disaster. A secondary source of power will be required for the EOC that will be a part of the new city offices scheduled to begin construction in Summer 2005.

## **The Plan Maintenance Update Process**

The City of Orinda Police Department will ensure that monitoring of this Annex will occur. The plan will be monitored on an on-going basis. However, the major disasters affecting our community, legal changes, notices from ABAG as the lead agency in this process, and other triggers will be used. Finally, the Annex will be a discussion item on the agenda of the meeting of City department heads at least once a year in May. At that meeting, the department heads will focus on evaluating the Annex in light of technological and political changes during the past year or other significant events. This group and the Public Safety Committee will be responsible for determining if the plan should be updated.

The City of Orinda is committed to reviewing and updating this plan annex at least once every five years, as required by the Disaster Mitigation Act of 2000. The Community Police Officer will contact ABAG four years after this plan is approved to ensure that ABAG plans to undertake the plan update process. If so, the City again plans to participate in the multi-jurisdictional plan. If ABAG is unwilling or unable to act as the lead agency in the multi-jurisdictional effort, other agencies will be contacted, including the County's Office of Emergency Services. Counties should then work together to identify another regional forum for developing a multi-jurisdictional plan.

The public will continue to be involved whenever the plan is updated, and as appropriate during the monitoring and evaluation process. Prior to adoption of updates, the City will provide the opportunity for the public to comment on the updates. A public notice will be posed prior to the meeting to announce the comment period and meeting logistics.